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AUTHOR Cohen, Michael P.
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ABSTRACT

The National Center for Education Statistics (NCES) conducts a variety of surveys on elementary, secondary, and postsecondary education. Recently an Integrated Sampling Team has been formed to explore the possible gains from a greater integration of these surveys and from new technology. The team will investigate the feasibility and desirability of a national reference file of education institutions in a relational database, sampling from the master reference file for specific surveys, and using telephone exchanges as primary sampling units for an area frame. This paper describes the project in an effort to stimulate interest and discussion among members of the survey-sampling community. The team expects to have a final report on feasibility and desirability issues in 1995. At that time NCES management will decide whether to move toward the national reference system and associated plans. One table lists NCES surveys. (SLD)

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INTEGRATED SAMPLING OF EDUCATION INSTITUTIONS

Michael P. Cohen, National Center for Education Statistics*
555 New Jersey Avenue NW, Washington, DC 20208-5654

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Key Words: Colleges, Frame Development, Schools

Abstract: "Integrated sampling" includes frame development for elementary, secondary, and postsecondary institutions, public and private, and the coordinated drawing of samples from these frames. The U.S. National Center for Education Statistics is investigating the potential advantages and disadvantages of the integrated approach. This paper summarizes our effort so far.

1. Introduction

The U.S. National Center for Education Statistics (NCES) conducts a wide range of surveys on elementary-secondary and postsecondary education (Table 1). Recently an Integrated Sampling Team, drawing members from the various divisions of NCES, has been formed. The purpose, in general terms, is to explore possible gains from a greater degree of integration of the surveys and from new technology (for instance, relational databases). More specifically, the team will investigate the feasibility and desirability of

(1) developing and maintaining a master national reference file system of education institutions in a relational database,

(2) sampling from the master reference file for specific surveys, and

(3) using telephone exchanges as primary sampling units for an area frame.

It should be emphasized that this work is still in its very preliminary stages. The purpose of the paper is to promote awareness of the project and to stimulate discussion among members of the survey sampling community. We hope to hear from others engaged in similar activities.

For more information about NCES surveys, a good starting place is Davis and Sonnenberg (1993). This publication provides a general overview and more detailed references on specific surveys and programs.

2. Master National Reference File System

The master national reference file system would be a database of schools, colleges, universities, and other education institutions, both public and private. There is some interest in including pre-kindergarten schools, given the growing recognition of their importance in many children's educational development, but this would probably not happen right away if at all.

There are several definitions of "school" in common use. Some definitions, for example, put primary importance on the school building as defining the school — others recognize the possibility of multiple schools (for instance, a middle school and a high school) in the same building. Other important concepts, such as "library," also can be defined in many ways, depending on the situation. We hope that the reference file system would be able to provide a linkage among these various definitions.

The reference file system should, as well, be able to link among the levels of the education system: school, school building, school district, county, and state for elementary-secondary education; institution, university system, state, and higher education regional accreditation area for postsecondary education. For flexibility in choosing sampling strata for surveys, the system should link each education institution to U.S. Bureau of the Census tract data. Postal ZIP codes and telephone exchanges should be available.

Births and deaths of education institutions (particularly common among private schools and proprietary postsecondary institutions) will need to be tracked and up-to-date listings maintained. Components needed for sampling from an area frame should be planned for and included.

It would be helpful to have a standard education institution identification code. There are currently multiple coding schemes.

Should the master national reference file system be implemented, we would need an ongoing organization and staff to maintain the database long-term.

3. Sampling from Master Reference File

For the most part, surveys that sample elementary or secondary schools have selected their samples independently of other surveys that also sample these schools. A similar statement applies to surveys that sample postsecondary institutions. There are, of course, exceptions: for instance, the Teacher Followup Survey is closely integrated with the Schools and Staffing Survey, as is the Beginning Postsecondary Student Longitudinal Survey with the National Postsecondary Student Aid Study. In general, these integrated surveys are conducted within the same branch in the organizational structure of NCES.

Although independence in drawing samples of education institutions may be advantageous in terms of economy of operation, there are potential drawbacks as well. One concern is respondent burden and "burn-out" — an education institution that is selected for multiple surveys may grow tired of cooperating. On the other hand, it may be desirable to have a degree of controlled duplication in the education institutions selected for certain important surveys so that researchers may exploit the joint information in the overlap subsample.

It may also be worthwhile to have a staff intimately familiar with the master national reference file system that could draw the samples. The staff

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Table 1: NCES Surveys

Common Core of Data
Schools and Staffing Survey (SASS)
SASS Teacher Followup Survey
Private School Survey
National Household Education Survey
Fast Response Survey System
NCES Items in the Current Population Survey
Integrated Postsecondary Education Data System
National Household Education Survey (Adult Education Component)
Recent College Graduates Study
National Postsecondary Student Aid Study
National Study of Postsecondary Faculty
Survey of Earned Doctorates Awarded in the United States
Postsecondary Education Quick Information System
National Assessment of Educational Progress
International Education Statistics
High School Transcript Studies
National Adult Literacy Survey
National Longitudinal Study of the High School Class of 1972
High School and Beyond
National Educational Longitudinal Study of 1988
Beginning Postsecondary Student Longitudinal Study
Baccalaureate and Beyond Longitudinal Study
Public Library Statistics (Federal-State Cooperative System)
Academic Library Survey

could have available pre-written software suitable for most commonly used sample designs and tailored to sampling from the database of education institutions.

4. Telephone Exchanges as Primary Sampling Units

In recognition of the growing importance and utility of telephone surveys, the Integrated Sampling Team will investigate the feasibility and advantages of sampling using the telephone exchanges as the primary sampling units. One desirable feature of this approach is that telephone companies update their telephone books very frequently.

A related idea is to keep track of the location of respondents in the National Household Education Survey (which uses random digit dialing) by mapping the telephone exchanges to geographic areas.

5. Final Comments

The team expects to have a final report on the feasibility and desirability issues by some time in 1995. At that point a decision will be made by the higher management of NCES on how to proceed.

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Reference

Davis, C.J., and Sonnenberg, W.C. (eds.). (1993). *Programs and Plans of the National Center for Education Statistics, 1993 Edition.* Washington, DC: National Center for Education Statistics.

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